EASY GUIDE TO START YOUR CAREER

Urology

SABER'S

HANDBOOK

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166. Urological Symptoms

1. Pain:

- May be located over the site of pathology e.g. testes
- May radiate:

Kidney pain	In the renal angle (between the lower border of the 12th rib and the spine)
Ureteric pain	Between the renal angle and the groin
Bladder pain	In the supra-pubic region
Prostatic pain	In the perineum but may radiate along the urethra to the tip of the penis
Suprapubic pain	Is exacerbated by bladder filling

2. Urinary incontinence:

- Affects women more commonly than men
- The loss of voluntary control of bladder emptying
- Patients may hesitate to talk about this to avoid the phrase (wetting yourself)
- You should ask about it immediately after asking about urgency:

"Do you ever feel the desperate need to empty your bladder?"
"Have you ever not made it in time?" or by asking about "Loss of control"

- "True": total lack of control: suggest a fistula between the urinary tract and the exterior or a neurological condition.

Stress incontinence

- Leakage that occurs at times of increased intra-vesical pressure e.g. during coughing, sneezing, lifting, laughing

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- Results from incompetence of urethral sphincter and bladder neck mechanism. Usually related to pregnancy and child birth.

Urge incontinence

- Urine leakage that occurs in association with a strong desire to void
- Urine leaks from the bladder before the patient is able to reach a toilet
- **Causes** include over activity of the detrusor muscle, urinary infection, bladder stones and bladder cancer
- Stress and urge incontinence frequently coexist

Dribbling or overflow: continual loss of urine from a chronically distended bladder typically in elderly men with prostate disease.

Insensible urine leakage:

- Occurs without any associated symptoms.
- Urine leaks from the bladder continuously and the patient is sometimes unaware.
- **Causes:** overflow incontinence from chronic retention, fistulation (commonly between bladder and vagina), and gross sphincter disturbance resulting from surgery or neurological disease.

3. Urinary frequency

- This is the passage of urine more often than normal for the patient
- **Ask:** How many times a day?
- **Ask** about the volume of urine passed each time (you are attempting to decide whether the patient is producing more urine than normal or simply feeling the urge to urinate more than normal)

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4. Urgency

- It is the sudden need to urinate: a feeling that the patient may not be able to make it to the toilet in time
- Ask about expelled amount?

5. Nocturia

- Urination during night
- Does the patient wake from sleep to urinate?
- How many times at night?
- How much urine is expelled each time?

6. Terminal dribbling

- A male complaint & usually indicate of prostate disease
- This is a dribbling of urine from the urethra at the end of micturition
- Requiring an abnormally protracted shake of the penis and may cause embossing staining of the clothes.

7. Hesitancy

- Difficulty in starting to micturate.
- The patient describes standing and waiting for the urine to start flowing
- Usually d.t bladder outflow obstruction d.t prostatic dse or strictures.

8. Dysuria

- "Pain on micturition "usually is described by the patient as "burning" & felt at the meatus

9. Incomplete emptying

- This is the sensation that there is more urine left to expel at the end of micturition
- Suggests detrusor dysfunction or prostatic disease

10. Intermittency

- The disruption of urine flow in a stop-start manner

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- **Causes** include: prostatic hypertrophy, bladder stones and ureterocoeles

11. Oliguria and Anuria

- Oliguria is the excretion of **< 300mL urine in 24 hours**
- **Causes** can be physiological (dehydration) or pathological (intrinsic renal disease, shock or obstruction)
- Anuria is the **absence of urine formation**
- **Causes:** severe intrinsic renal dysfunction, shock, urinary tract obstruction (ureteric obstruction)

12. Polyuria

- It is the excessive excretion of large volume of urine and must be carefully differentiated from urinary frequency (the frequent passage of small amounts of urine)
- **Some causes:**
  - Ingestion of large volume of water (including hysterical polydepsia)
  - DM
  - Diabetes insipidus (failure of the action of ADH at the renal tubules)
  - Chronic renal failure
- Remember to ask the patient about the use of diuretics.

13. Erectile dysfunction (ED)

- Commonly known as "impotence"
- Inability to attain and maintain an erection adequate for satisfactory sexual intercourse.
- Men with incomplete ED respond more satisfactorily to treatment.
- The majority of cases have an organic basis.
- All cases have a degree of psychogenic involvement.
- 20 % of cases are primarily psychogenic.

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14. Premature ejaculation

- More common in younger men
- Has a psychogenic basis
- Often associated with performance anxiety

15.Loss of libido

- Loss of normal sex drive
- Either psychogenic or related to hypogonadal states

16. Haemospermia

- Presence of blood in ejaculate
- Rarely associated with significant pathology

▶**References:**

Oxford handbook of clinical surgery p334, 335

Oxford handbook of clinical examination & practical skills p236, 237

167. Chronic retention

- Bladder capacity may be > 1.5L

■ **Presentation**

- ○ Overflow incontinence
- ○ Acute or chronic retention
- ○ Lower abdominal mass
- ○ UTI
- ○ Renal failure (in the form of bilateral obstructive uropathy)

N.B: Post-obstructive diuresis

- In the acute phase after relief of the obstruction, the kidneys produce a lot of urine (as much as a liter) in the first hour
- It is vital to provide resuscitation fluids

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Tricks to aid voiding (micturition)

Privacy on hospital wards
Standing to void
Voiding to the sound of running taps
Voiding in a hot bath

References:

Oxford handbook of clinical surgery, p 366, 37
Oxford handbook of emergency medicine p 518, 519
OHCM p 602, 603

168. UTI التهاب المسالك البولية

- The main organism is E.Coli.
- More common urethritis, cystitis, prostatitis& Pyelonephritis
- Urethritis: Dysuria, Loin or Abdominal pain

- **Cystitis =**
  - Frequency بيدخل الحمام كتير
  - Dysuria حرقان مع البول
  - Urgency مش بيعرف يمسك نفسه
  - Hematuria
  - Supra-pupic pain
- **Pyelonephritis حول لجراح مسالك**
  - = High grade fever
  - Rigors
  - Vomiting
  - Loin pains
- **Prostatitis = حول لجراح مسالك**
  - Flu-like symptoms
  - Low-Back pain

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- Few urinary symptoms
- Swollen ort end or prostate on PR

N.B: Up to $^1/_2$ of all non-pregnant women with symptoms of Lower UTI have no detectable bacterial infection so drug treatmentis often unnecessary.

هتعمل ايه؟

تحليل بول / مزرعة بول / ابدأ Empirical treatment

العلاج:

نصائح للمريض:

١. اشرب كميات كبيره من الماء في اليوم (حوالي ٢ لتر يومياً)

٢. التبول كلما جاءت الرغبة= ماتمسكش نفسك ولا تحبس البول

ابدأ Empirical

A. Females with simple UTI

Trimethoprim 400 mg	
R/ Septazole 400/80 tab 1×2×3	12 L.E
Or R/ Curam 1 gm tab 1×2×7	76 L.E

B. Children >12 yr old and Men (Simple UTI)

R/ Curam 625 mg 1×3×10 days	48.75 L.E

C. Cystitis:

R/ Septrin DS 800/160 1×2×3 (♀)	13.50 L.E
1×2×7 (♂)	
Or R/ Cipromax 500 1×2×5	49.5 L.E
Or R/ Ciprofar 500 1×2×5	36 L.E

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نصائح لالتهاب المسالك المتكرر عند السيدات:

1. ↑ Fluid intake اشربي سوائل كتير
2. Urinate more frequently ادخلي الحمام كتير
3. Use lubricant with intercourse استخدمي مزلق أثناء الجماع
4. Improve perineal hygiene الاهتمام بالنظافة
5. Avoid tight clothing تجنبي الملابس الداخلية الضيقة
6. Avoid scented soap soap

حاولي تتجنبي الصابون المعطر والشاور جل

7. Contraception: Diaphragm may encoursge (UTIs).

◄ حول أي حالة لا تستجيب للعلاج أو عندها مشكلة في الـ

Urine output = UOP

169. Proteinuria

- Total protein excretion is usually < 50mg/24 hrs of which albumin alone is < 30mg/24 hrs
- Abnormal proteinuria is regarded as > 150mg/24hrs
- A trace of proteinuria on dipstick in the absence of microscopic haematuria is nearly always benign

■ **Causes:**

Renal causes
- UTI
- Glomerulonephritis

DM
Myloma
Amyloid
Fever
Exercise
Pregnancy
CCF
Vaginal mucus
Recent ejaculation
Orthostatic proteinuria (postural)
Hypertension

- Exclude fever or recent exercise

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- Dipstick urine for nitrite, leucocytes and blood
- MSU for culture and sensitivity
- Check BP
- Serum creatinine and electrolytes
- Fasting blood sugar
- 24 hr urine collection for total protein excretion (150mg of protein/24 hrs is the upper limit of normal, < 30mg/d of albumin)

Orthostatic proteinuria

- It is proteinuria < 1g/L which disappears when lying supine
- Occasionally found in healthy young subjects in whome protein is not detected in the first urine passed after sleeping recumbent overnight but is present during the day.

Reference: McLeod's p 224

Tip

A patient with **persistent proteinuria** (i.e. dipstick positive for protein recorded on 3 separate urine samples, including an early morning urine) with or without microscopic haematuria, **should be referred** to a nephrologist for renal imaging and biopsy.

References:

OHCM p278

GP: p66

170. Urinary incontinence

- **Def:** Involuntary leakage of urine.
- 60 % of the elderly.
- 40 % of women over the age of 20 suffer from some form of urinary incontinence.
- Urge incontinence and stress incontinence are responsible for over 90% of cases of incontinence

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History

- Ask about type of incontinence (see symptoms)
- General questions: Ask about
  - Dysuria (suggestive of UTI, atrophic vaginitis or obstruction)
  - Liquid intake (alcohol and coffee are diuretics)
  - Drugs e.g. diuretics, antidepressants
  - The use of pads or towels
  - Past history e.g. stroke, dementia, parkinson's disease
  - Multiple sclerosis, prolapsed disc, spiral injury, previous pelvic surgery, obstetric hx.

Examination (abdominal, PR & PV): Look for

- Constipation, faecal impaction.
- Palpable bladder (over flow incontinence).
- Pelvic masses e.g. Fibroids.
- Other "Local" lumps e.g. Large inguinal hernia.
- Atrophic vaginitis.
- Enlarged prostate (in men).
- Tight foreskin (in men).
- Assess the pelvic floor muscle by asking the patient to pull up the pelvic floor while you are performing a pelvic examination.

Investigations

- Dipstick urine for blood, sugar (DM ??), protein, nitrite & leucocytes.
- MSU (Mid-Stream Urine) for microscopy culture and sensitivity (UTI?)
- Serum creatinine and electrolytes and fasting BS (DM??)
- A urinary documentation of frequency and volume of urine passed and drinks taken can be helpful.

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Management

- **Stress incontinence (due to weakness of the urethral sphincter)**

Encourage reduction of intra-abdominal pressure by:

1. Reducing weight.
2. Stopping smoking.
3. Avoiding constipation.
4. Avoiding heavy lifting.
5. Regular pelvic floor exercises: (i.e. repetitive squeezing of the pelvic floor) improve tone and support.
6. Tighten the front (bladder) and back (bowel) passages.
   - Count to 4 slowly then release slowly
   - Do this several times and repeat every hour or so if possible.
   - These exercises should ideally be continued for life
7. Treat atrophic vaginitis with local estrogen cream (estriol 0.1% cream) R/Ovestin cream 1x1x10
8. Refer for treatment of uterine prolapse and urodynamic investigations or surgery.

- **Urge incontinence (due to detrusor instability)**

1. Encourage the patient to void increasingly larger volumes of urine at less frequent intervals thus relearning inhibition of abnormal detrusor muscle contractions
2. Drugs can be used in addition to bladder retraining
   Give oxybutynon 2-5.5 mg 1x2
   R/Uripan 5mg 1x3
3. The patient may need psychological support

References:

1.GP: p67-70
2.OHCM: p604, 605

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171. Benign prostatic hyperplasia (BPH)

■ Key facts

- BPH is a non-malignant enlargement of the prostate with stromal and glandular components increase
- Incidence : 25% in 40-60 ys - 40% in over 60 ys

■ Clinical features

- **Storage symptoms** such as frequency, urgency, & incontinence
- **Voiding symptoms** including hesitancy, poor stream, intermittency, terminal dribble & abdominal straining, incomplete emptying and chronic or acute retention of urine
- Haematuria
- UTI
- Stone formation
- Acute or chronic retention of urine
- Overflow incontinence
- Obstructive renal failure

■ Investigations

- Exclude cancer by PR, PSA, trans-rectal US ± biopsy
- **Note:** PSA before PR as PR ↑PSA
- Serum creatinine, urine analysis.
- U/S (residual volume estimation, hydrophoresis).

■ Treatment

Medical treatment

- Wait and see is an option but risks are incontinence and renal failure
- **α-blockers** : as doxazosin

  R/ **Cardura** 1, 4 mg 1x1 or 1x2 (1 mg)

يبدأ المريض بجرعة ١ مجم يوميا ثم تزداد حتى تصل بحد أقصى إلى ٨ مجم يوميا

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- SE: drowsiness, dizziness, depression, hypotension (especially postural), dry mouth, ejaculatory failure, extra-pyramidal signs, nasal congestion, weight .
- They are the drugs of choice.
- 5-α reductase inhibitors : as finasteride 5 mg/day PO
  R/ Proscar 1x1
  - SE: impotence, ↓libido
  - Excreted in semen so warn to use condoms
  - Females should avoid handling crushed pills.

Surgical treatment

- TURP: trans-urethral resection of the prostate: the most common.
- TUIP: trans-urethral incision of the prostate.
- Open retro-pubic prostatectomy
- LASER prostatectomy

References

OHCM : P 602

Oxford handbook of clinical surgery : P 342,343

172. Prostatism

■ Prostatism or symptoms of outflow obstruction is common particularly in the elderly.

■ **Diagnosis**

History : ask about:

- Poor urinary stream
- Hesitancy
- Frequency
- Nocturia
- Terminal dribble
- Bone pain which: raises the possibility of malignant bone secondaries

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Examination

- The enlarged bladder of urinary retention.
- Enlargement of the prostate by PR (as a general rule the malignant prostate is hard, craggy, irregular and often enlarged, with the central sulcus obliterated)

Investigations

- MSU: to exclude UTI as a cause of frequency.
- Electrolyte & creatinine to exclude obstructive uropathy.
- Serum PSA: a level greater than 4.0 raises the possibility of malignancy but there are many false positive results.

■ Management

- For frequency and nocturia give ablocker (relaxes smooth ms producing increase in urinary flow rate).
- Refer to urology if you suspected malignancy, obstructive uropathy or symptoms resistant to treatment.

■ Screening of prostatic cancer by:

- Regular PR
- Trans-urethral US screening
- Serum PSA

References:

General practice: P 70, 71

173. Erectile dysfunction

■ Definition:

- the inability to get or maintain an erection sufficient for the completion of sexual activity.
- It is distinct from premature, retrograde or delayed ejaculation.

■ Causes : include:

1. **Psychogenic** : anxiety, depression
2. **Drugs** : antihypertensives, tobacco, alcohol

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3. Vascular & Endocrine
4. Hyper-cholesterolaemia, DM, hyperthyroidism, hyper-prolactinaemia, hypogonadism
5. **Neurological:** Parkinson's disease, spinal injury, neurological disease following pelvic surgery, pelvic **fracture.**
6. **Penile: cavernisitis, peyronie's disease.**

- Presence of morning erection strongly suggests psychogenic cause.
- Lack of lower limb pulses suggests vascular cause.

■ Investigation & Diagnosis

- Check blood glucose (DM?)
- Lipids (hyper-cholesterolaemia?)
- TFTs (hyperthyroidism?)
- Serum electrolytes
- Hormone profiles (testosterone, FSH/LH, prolactin)

■ Treatment

1. Life style advice:

Advise the patient to try to avoid stress & anxiety, stop smoking and alcohol & to discuss any problem of sexual dissatisfaction with his partner.

2. Oral phosphodiestrase-5 inhibitors e.g. Sildenafil (Viagra™) Tadalafil (Cialis), Vardenafil (Levitra)

R/Viagra ™ 50 or 100 tab. (or Vigorex, Vega)

قرص قبل الجماع بحوالى ساعة على معدة خاوية

■ Refer

- For psychosexual counseling
- To urologist for vaso-active injections, penile prostheses or vaccum devices

References:

GP : P 74,75
Oxford handbook of clinical surgery: P352

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174. Premature ejaculation

▶ Very common particularly in young men having their first sexual relationship.

■ History

- Ask whether the problem has been lifelong or of recent onset.
- Recent anxiety, change of partner or of sexual position/practice may be the cause.
- Successful ttt is more likely if the man has discussed the problem with his wife.

■ Management

- The general principle of ttt is to encourage the man to learn how it feels when he is about to ejaculate & stop the stimulation before reaching this point & resuming when the feeling has declined.
- Tell him to use Stop/Start or squeeze technique (let the wife squeeze the glans penis herself).

Stop/Start technique

- When the man feels close to ejaculate; he should stop and relax for 30 seconds.
- If no improvement refer for psychosexual counseling.

References:

GP : P 75
Oxford handbook of general practice p 747

175. Scrotal swelling

■ The most common causes are:

- Epididymal cyst.
- Inguino-scrotal hernia.
- Hydrocele.
- A sebaceous cyst of the scrotal skin may be described as a scrotal swelling.

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- Testicular tumors are rare.

■ Diagnosis

History:

- Ask about **pain** in the scrotum.
- The following are painless:
  - Inguino-scrotal hernia
  - Hydrocele
  - Epididymal cyst
- A history of trauma suggests secondary hydrocele or haematocele

Examination

- Examine the patient standing.
- If palpation above the swelling is impossible it is an inguino-scrotal hernia.
- If palpation above the swelling is possible and the swelling is above the testicles; it is either an epididymal cyst or a varicocele.
  - A **varicocele** fells like a bag of worms
  - An **epididymal cyst** will trans-illuminate easily.
- A **hydrocele** is usually large and tense & trans-illuminates easily. The testicles can't be felt as it is within the hydrocele.
- A **sebaceous cyst** is superficial & confined to the scrotal skin.
- Testicular tumors cause enlargement of a testicle.

▶ request a scrotal US scan if there is any doubt about diagnosis & to exclude testicular tumors.

■ Management

Sebaceous cyst: reassure

Hydrocele: if small : no action, if large : refer for aspiration

Other swellings: refer.

References:

GP : P 77,78

Oxford handbook of clinical surgery : P 346,347

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176. Testicular pain

- The most common presentation of testicular pain in general practice is mild & transient & cause is often not found.

■ Diagnosis

History & examination

A. Severe pain in the testicles suggests torsion or acute epididymo-orchitis.

1.Testicular torsion

- **Peak age** : 12-18 ys (extremely rare above 25 ys)
- Sudden onset of moderate to severe constant unilateral scrotal pain often with nausea, vomiting and abdominal pain.
- The testicles are globally tender, high in the scrotum.
- Absence of ipsilateral cremastric reflex is the most reliable sign.

2.Acute epididymo-orchitis

- Common organisms include: Chlamydia trachomatis, Neisseria gonorrhea in the young (sexually transmitted infections)
- **$^1/_3$ of male adolescents with mumps develop orchitis** which is unilateral in 80% & $^1/_3$ of these testes atrophy.
- Gradual onset of pain (hours or days)
- Dysuria, urethral discharge & pyrexia are common.
- May be a recent hx of cystitis, prostatitis or prostatectomy.
- **Cremastric reflex** is preserved.
- **Prehn's sign** (relief of pain with scrotal elevation)
- There may be red skin over the infection & the most tender part is often to be above the testicles.
- In both torsion and epididymo-orchitis there may be scrotal swelling due to oedema or inflammation

B. Other possible causes of pain include :

- Ureteric calculi
- Inguino-scrotal hernia

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- Groin strain
- Malignancy
- Psychological.

■ Management:

1. Acute severe testicular pain should be referred immediately for exploration (fear of torsion and testicular ischemia)
2. Mild pain where examination is normal give R/Brufen 400 1x3 & most cases resolve spontaneously.
3. If you suspect epididymo-orchitis take an MSU & urethral swab for gonococcus and chlamydia.
4. If you suspected STI give R/Ceftriaxone 250 mg IM single dose + R/Vibramycin or Doxy-R 100 1x2x7 days PO or refer to genitor-urinary medicine.
5. Give R/Ciprofloxacin 500 1x2x10-14 days for UTI
6. Scrotal elevation, local ice therapy may help
7. Treatment of acute viral orchitis is symptomatic.

References:

GP : P 78,79

Oxford handbook of clinical surgery: P 368,369.

177. Sexually transmitted infection (STIs)

- Chlamydia is the most common STI in men & is often asymptomatic.
- **Other STIs include:** Gonorrhea, Syphilis, HIV/AIDS, genital warts, herpes simplex and thrush.

■ Symptoms of Chlamydia:

- Pain on micturition.
- Urethral pain.
- Testicular pain.
- Joint pain (Reiter's syndrome)

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■ Examination

Examination is usually normal. Look for other STIs:

- Genital warts
- Herpetic ulcers
- Urethral discharge
- Inguinal lymphadenopathy
- Candidal balanitis

■ Treatment

Treat contacts empirically

Chlamydia:

R/Vibramycin 100 1x2x7 days

Or Azithromycin 1g single dose R/Zithromax 500 2x1

Other STI: refer

References:

1. GP: P 76, 77.

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